

Name: _____ Date: _____

Chapter 11 Review

1. Why do cells need to communicate?
2. Explain what happens during the three phases of signal transduction.
3. How cells use signaling pathways in their physiology.
4. How a signaling pathway can lead to an amplification of the response to the signal.
5. What is the purpose of second messengers?
6. The similarities and differences in G-Protein, Tyrosine Kinase, and ligand-gated ion channel signaling pathways.
7. Diagram the epinephrine signaling pathway. Diagram signal reception, transduction and response.
8. How a signaling pathway can have multiple physiological effects on a cell or organism.
9. Why do you think cellular signaling pathways and mechanisms are so universal among life's domains?
10. Define each of the following phenomena, identify the organisms that they occur in, and explain how cellular signaling is used in each of them:
 1. Mating in Yeast
 2. Apoptosis